

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

Claims 1-15 (canceled).

16. (New) A fuel injection system for an internal combustion engine having at least two cylinders, comprising:

at least two actuator elements, wherein at least one actuator element is assigned to each cylinder for injecting fuel into the cylinder; and

an injection regulating system for at least one of monitoring and resolving a conflict when triggering the actuator elements, wherein the injection-regulating system triggers at least one of the actuator elements at least one of earlier, later, and not at all, as a function of at least one of charging and discharging edges of the actuator elements during injections.

17. (New) The fuel injection system as recited in claim 16, wherein the actuator elements are piezoelectric elements.

18. (New) The fuel injection system as recited in claim 16, wherein the actuator elements are solenoid valves.

19. (New) A fuel injection system for an internal combustion engine having at least two cylinders, comprising:

at least two piezoelectric elements, wherein at least one piezoelectric element is assigned to each cylinder for injecting fuel into the cylinder by at least one of charging and discharging of the piezoelectric element, wherein a single supply unit at least one of charges and discharges the piezoelectric elements; and

an injection-regulating system for monitoring an overlap of a time interval in which a first piezoelectric element is to be at least one of charged and discharged with a time interval in which a second piezoelectric element is to be at least one of charged and discharged, wherein different priorities are assigned to at least two injections in such a way that a first injection is assigned a higher priority than a second injection, and

wherein the injection-regulating system at least one of advances, retards, and cancels at least one of the first and second injections as a function of at least one of charging and discharging edges of the piezoelectric elements during injections, so that one piezoelectric element is not charged if the other piezoelectric element is to be one of charged and discharged.

20. (New) A method for operating a fuel injection system for an internal combustion engine having at least two cylinders, the fuel injection system having at least two actuator elements, wherein at least one actuator element is assigned to each cylinder for injecting fuel into the cylinder, the method comprising:

monitoring for a conflict between triggering of the two actuator elements;

resolving the conflict by an injection-regulating system, wherein the injection-regulating system triggers at least one of the actuator elements at least one of earlier, later, and not at all, as a function of at least one of charging and discharging edges of the actuator elements during injections.

21. (New) A method for operating a fuel injection system for an internal combustion engine having at least two cylinders, the fuel injection system having at least two piezoelectric elements, wherein at least one piezoelectric element is assigned to each cylinder for injecting fuel into the cylinder by at least one of charging and discharging of the piezoelectric element, and wherein a single supply unit at least one of charges and discharges the piezoelectric elements, the method comprising:

monitoring, by using an injection-regulating system, for an overlap of a first time interval in which a first piezoelectric element is to be at least one of charged and discharged with a second time interval in which a second piezoelectric element is to be at least one of charged and discharged; and

at least one of advancing, retarding, and canceling at least one of first and second injections, by using the injection-regulating system, as a function of at least one of charging and discharging edges of the piezoelectric elements during injections, so that one piezoelectric element is not charged if the other piezoelectric element is to be one of charged and discharged.

22. (New) The method as recited in claim 21, wherein different priorities are assigned to the first and second injections, and wherein the at least one of advancing, retarding, and canceling at least one of the first and second injections is determined as a function of relative priorities of the injections.

23. (New) The method as recited in claim 21, wherein different priorities are assigned to the first and second injections, and wherein the at least one of advancing, retarding, and canceling at least one of the first and second injections is determined independently of relative priorities of the injections.

24. (New) The method as recited in claim 21, wherein the at least one of advancing, retarding, and canceling at least one of the first and second injections is determined as a function of a type of overlap between the first time interval and the second time interval.

25. (New) The method as recited in claim 21, wherein the at least one of advancing, retarding, and canceling at least one of the first and second injections is determined independently of a type of overlap between the first time interval and the second time interval.

26. (New) The method as recited in claim 21, wherein the at least one of advancing, retarding, and canceling at least one of the first and second injections is determined as a function of a type of injection for at least one of the first and second injections, and wherein different types of injection include a pilot injection, a main injection, an a post-injection).

27. (New) The method as recited in one of claim 21, wherein the at least one of advancing, retarding, and canceling at least one of the first and second injections is determined as a function of a previous injection-timing adjustment.

28. (New) The method as recited in claim 20, wherein for singular primary collision and secondary collision, the at least one of advancing, retarding, and canceling at least one of the first and second injections includes one of:

- a) advancing a low-priority injection edge;
- b) retarding a low-priority injection edge;
- c) advancing a higher-priority injection edge;
- d) retarding a higher-priority injection edge;

e) advancing a higher-priority injection edge and simultaneously retarding a low-priority injection edge;

f) retarding a higher-priority injection edge and simultaneously advancing a low-priority injection edge;

g) retarding a higher-priority injection edge and simultaneously retarding a low-priority injection edge; and

h) advancing a higher-priority injection edge and simultaneously advancing a low-priority injection edge.

29. (New) The method as recited in claim 28, wherein injection edges not involved in the overlap are left unchanged.

30. (New) The method as recited in claim 28, wherein for a multiple primary collision and a secondary collision, the at least one of advancing, retarding, and canceling at least one of the first and second injections is achieved by satisfying the following boundary conditions:

a) each of overlapping injection edges is allowed to be at least one of advanced and retarded;

b) not all overlapping injection edges must be shifted;

c) after the at least one of advancing, retarding, and canceling at least one of the first and second injections, the previously overlapping injection edges are non-overlapping, so that a time interval in which the first piezoelectric element is to be at least one of charged and discharged does not overlap with a time interval in which the second piezoelectric element is to be at least one of charged and discharged; and

d) injection edges not involved in the overlap are allowed to be at least one of advanced and retarded.

31. (New) The method as recited in claim 21, wherein for singular primary collision and secondary collision, the at least one of advancing, retarding, and canceling at least one of the first and second injections includes one of:

- a) advancing a low-priority injection edge;
- b) retarding a low-priority injection edge;
- c) advancing a higher-priority injection edge;
- d) retarding a higher-priority injection edge;
- e) advancing a higher-priority injection edge and simultaneously retarding a low-priority injection edge;
- f) retarding a higher-priority injection edge and simultaneously advancing a low-priority injection edge;
- g) retarding a higher-priority injection edge and simultaneously retarding a low-priority injection edge; and
- h) advancing a higher-priority injection edge and simultaneously advancing a low-priority injection edge.

32. (New) The method as recited in claim 31, wherein injection edges not involved in the overlap are left unchanged.

33. (New) The method as recited in claim 31, wherein for a multiple primary collision and a secondary collision, the at least one of advancing, retarding, and canceling at least one of the first and second injections is achieved by satisfying the following boundary conditions:

- a) each of overlapping injection edges is allowed to be at least one of advanced and retarded;

b) not all overlapping injection edges must be shifted;

c) after the at least one of advancing, retarding, and canceling at least one of the first and second injections, the previously overlapping injection edges are non-overlapping, so that a time interval in which the first piezoelectric element is to be at least one of charged and discharged does not overlap with a time interval in which the second piezoelectric element is to be at least one of charged and discharged; and

d) injection edges not involved in the overlap are allowed to be at least one of advanced and retarded.